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ABSTRACT

Two questions are raised: Is it possible to characterize the notion human language in terms of absolute and typological universals? And if so, what is the relationship between these universals and those formulated for primary languages? Given these questions, the purpose of the paper is to: (1) investigate some of the methodological considerations involved in attempting to characterize the notion in terms of universals; (2) consider the implications of the language-contact situation in attempting to define interlanguages in these terms; and (3) provide examples of logically-possible but empirically-unsubstantiated, types of interlanguages. Interlanguage forms from native speakers of Japanese, Mandarin, Spanish, and Farsi provide data for investigation of these questions. The discussion also questions whether the grammars of interlanguages obey the same constraints as the grammars of primary languages. (JK)

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# Universals, Typologies and Interlanguage*

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1.0 Introduction and purpose

It is generally agreed that the central goal of descriptive linguistics is to characterize the notion human language. One of the ways in which linguists have tried to reach this goal is through the formulation and testing of two types of universal statements: absolute universals and typological universals.[1] The logical form of absolute and typological universals is shown, respectively, in (1a) and (1b), where X and Y are assertions about structural properties of language.

(1) a. In all languages, Y
b. In all languages, if X then Y

Examples of these types of statements are shown in (2).

(2) a. Absolute universal

In all languages, there are at least two color terms.

b. Typological universal

In all languages, if there are passive sentences with expressed agents, there are also passives without expressed agents.

Both types of universals contribute to characterizing what can and cannot be a human language. Absolute universals define what are assumed to be the essential properties of language; typological universals help to delimit the range of possible variation among languages. According to (2a), a communication system that did not have at least two color terms would not be a human language. Likewise, languages may not differ from one another such that one language has only agentless passives whereas another has only agentive passives. Thus, it is claimed that a system with only agentive passives cannot be a human language.

Almost without exception, universal statements such as the above have been formulated on the basis of data from primary languages (PL) (in the sense of Lamendella 1977). This is most likely due to the well-known fact that primary languages are describable in terms of a system of rules, and are

therefore amenable to this type of study. Within the last decade, however, research on secondary language acquisition (SLA) has determined that a learner internalizes a set of rules termed an interlanguage (IL) (Selinker 1972), which may be independent of both the native language(NL) and the target language (TL).

Within this context, we wish to raise two questions: (1) Is it possible to characterize the notion human interlanguage in terms of absolute and typological universals? And (2) if so, what is the relationship between these universals and those formulated for primary languages? Given these questions, the purpose of this paper is as follows: (a) to investigate some of the methodological considerations involved in attempting to characterize the notion human interlanguage in terms of universals; (b) to consider the implications of the language-contact situation in attempting to define interlanguages in these terms and (c) to provide examples of logically-possible, but empirically-unsubstantiated, types of interlanguages which we will attempt to explain within our framework.

## 2.0 The Hypothesis

2.1 A priori, a reasonable way to attempt to characterize IL's with respect to PL's would be to formulate a set, $U_{il}$, of interlanguage universals and to compare it with the set, $U_{pl}$, of primary language universals. If such a comparison could be made, we would have one of the relationships shown in (3).[2]

(3) a. $U_{il}$ and $U_{pl}$ are identical
b. $U_{il}$ and $U_{pl}$ are disjoint
c. $U_{il}$ and $U_{pl}$ intersect
d. $U_{il}$ is a subset of $U_{pl}$
e. $U_{pl}$ is a subset of $U_{il}$

If (3a) turned out to be true, then, of course, IL's and PL's would be structurally the same. If (3b) were true, on the other hand, then there would be

no universal statements which are true of PL's which are also true of IL's, and vice versa. In this case, PL's and IL's would be structurally distinct. If (3c) were the case, then there would be some universal statements which are shared by primary languages and interlanguages, but there would also be universals which are true for primary languages which are not true for interlanguages, and vice versa. If either (3d) or (3e) were true, then one type of language would be a subtype of the other, where they shared a number of universal statements, but some universals were true of one type of language but not true for the other.

From a practical point of view, however, this way of proceeding is precluded by the fact that we do not as yet have a set of IL universals in which we would have sufficient confidence to warrant a comparison with $U_{pl}$. On the other hand, we do have a reasonably sizeable stock of PL universals which we could test against IL's. Given this situation, it seems that the strongest hypothesis that we can test at present is that stated below.

(4) Given the set $U_{pl}$ of absolute and typological universals formulated on the basis of primary languages, there will be no interlanguage which violates any statements in $U_{pl}$.

Thus, the present state of the art in SLA allows us to test whether any PL universals are violated by IL's; it does not allow us to test (1) whether $U_{pl}$ and $U_{il}$ are identical; or (2) whether there are any universals which are particular to interlanguages.

This being the case, the hypothesis in (4) allows us to exclude some of the potential relationships between IL's and PL's stated in (3), but it does not permit us to test all of them. If (4) turns out to be true, then any one of the statements in (3a, d or e) could still be true. It would remain an open question whether universals of interlanguages and primary languages were identical, or in a subset relationship. Alternatively, if (4) turns out to be false, then it remains to be seen whether the two sets of universal statements are completely different or are overlapping.

One further point needs to be made about the hypothesis in (4). The purpose in proposing such a hypothesis is not only to know <u>whether</u> it is

true or false, but also to determine why this is so. Therefore, in considering various IL's with respect to (4), we want to know whether it is possible to offer an explanation for any given IL adhering to or deviating from any statements in $U_{pl}$. A reasonable domain in which to look for such an explanation is the structure of the respective NL and TL. This is not to say that no other factors could be involved, or that there are no other explanations outside of the structural aspects of the NL and TL. Rather, it just seems likely at this stage of our knowledge that explanations of structural properties of IL's will be explainable only if they can be related to structural properties of the NL, TL or language in general. We shall return to this point below.

In what follows we will attempt to test our hypothesis against some IL data. However, before we proceed with this test, there are two considerations which must be discussed: (1) the originality of the proposed hypothesis; and (2) the relationship of the NL and TL in testing our hypothesis.

2.2 First of all, if the hypothesis in (4) can be maintained, then interlanguages and primary languages are clearly similar types of language systems. As stated above, it would still remain to be seen whether they are in fact structurally identical, or whether one is a subtype of the other. However, the point to be made here is that the proposition that PL's and IL's are similar types of languages is not new. In fact, much of the research on SLA during the last ten years has been devoted to arguing for the truth of this hypothesis. Thus, for example, Richards (1971), Dulay and Burt (1973, 1974a, 1974b), Bailey, Madden and Krashen (1974) and Schumann (1979) have claimed that secondary and primary language acquisition are fundamentally the same process, and that any deviations in the outcome can be systematically explained in terms of psychological and/or sociological variables. Similarly, Andersen (1979), has argued that secondary and primary language acquisition are similar in that they both involve progression toward an internal and an external norm in their early and late stages, respectively. Tarone (1979) and Beebe (1980) have shown that IL's function similarly to PL's in that they both exhibit systematic variation according to the speech-situation and interlocutor relationship. And finally, Adjemian (1976) has claimed the IL's and PL's are alike on the basis of how they de-

velop, function and are transmitted to other learners.

The primary assumption underlying the above-mentioned work and the hypothesis in (4) is that there will be some significant similarities between IL's and PL's. The major distinction between the above works and our hypothesis is that the latter attempts to make a testable claim about what can and what cannot be a viable interlanguage. That is, the hypothesis in question attempts to exclude certain systems from the class of human IL's, and in so doing, makes a prediction about what kinds of IL's are possible. On the other hand, statements concerning the forms, acquisition, function and variation exhibited by IL's approach the question of the nature of interlanguages from a different side. Such statements do not have the effect of making a prediction about what types of IL's are allowed and what types are excluded. Consequently, the present paper differs from the above-cited work in that it attempts to test certain structural aspects of IL's against universal properties of PL's, with a view toward empirically determining whether IL's and PL's are identical or distinct on structural grounds.

The second consideration which must be made clear concerns the treatment of evidence for our hypothesis. It seems plausible that a first guess as to whether PL universals will be true for interlanguages is that some will and some will not. That is, pre-theoretically we see that IL's are similar to PL's in some ways and different from PL's in other ways. More specifically, IL's and PL's are alike in that they both function as verbal communication systems; however, IL's are different from PL's in that IL's are learned by adults and always involve at least two languages coming into contact whereas PL's are learned by children and do not necessarily involve language contact. Thus, it seems at least reasonable that there could be certain structural similarities between the two language types, as well as certain structural differences. Given this situation, it seems that it is incumbent upon us to say something about the universals which hold for IL's as well as those that do not hold. A reasonable way to proceed along these lines would be to investigate whether IL's which adhere to or deviate from statements in $U_{pl}$ can be explained on the basis of the structural characteristics of the NL and TL.

This approach accomplishes two things: (1) it attempts to offer an

explanation for at least some of the structural similarities or differences that may exist between IL's and PL's; and (2) it recognizes a fundamental difference between IL's and PL's, namely, that IL's always entail contact between at least two other languages, whereas PL's do not. We will refer to the hypothesis in (4) and our assumptions about explaining properties of IL's in terms of the NL, TL and/or principles of language as our general framework.

Now given these assumptions, we have two parameters along which we may consider interlanguages with respect to our hypothesis: (1) whether the IL conforms to the statements in $U_{pl}$, and (2) whether any conformity/violation with respect to $U_{pl}$ can be explained in terms of the structure of the NL and TL. Thus, within this framework, we have the logically-possible situations depicted in (5).

(5)

| Type of IL | Violates $U_{pl}$? | Explainable in terms of NL/TL contact? |
|---|---|---|
| (A) | No | Yes |
| (B) | Yes | Yes |
| (C) | No | No |
| (D) | Yes | No |

The type A interlanguage clearly poses no problems for our general framework because, on the one hand, it does not violate any statements in $U_{pl}$, and on the other hand, its structural properties are explainable in terms of the contact situation. Type B interlanguages violate at least one statement in $U_{pl}$, but such violations can be explained in terms of the NL and TL. Therefore, type B IL's do not pose any significant problems in attempting to explain why IL's are the way they are. Similarly, type C IL's do not present serious difficulty, because they do not violate any statements in $U_{pl}$. The fact that some of their structural properties are not derivable from the contact between the NL and TL suggests that the present state of our knowledge does not permit us to explain why these IL's are the way they are, other than to say that they share certain structural properties of PL's. Type D interlanguages, however, do present a problem in that they exhibit violations of $U_{pl}$ without it being possible to explain these violations in terms of the NL and/or TL structures. Should such IL's exist, they would

pose a serious threat to the idea that IL's and PL's are fundamentally similar.

We shall give examples of each of the IL types if (5) below. Before we do so, however, let us consider one further aspect of the role that the NL and TL play in the nature of IL's.

2.3 In attempting to test the hypothesis in (4), it is necessary to bear in mind that at least some of the structure of any IL may be attributable to transfer from the native language. This fact has a bearing on what we would consider to be an interesting test of our hypothesis. In this section we will consider the types of IL's that will provide an interesting confirmation of our hypothesis as well as those IL's that will falsify it.

Ostensibly, it appears that for any given absolute universal in $U_{pl}$, we have a case supporting the hypothesis in (4) if what the universal asserts about primary language is also true of the interlanguage in question. Conversely, it would seem that the hypothesis is false if what the universal claims to be true for primary languages is not true for IL's. However, because at least some of the IL system may be attributable to NL transfer, we do not have both of the above-mentioned situations as an interesting test of the hypothesis. More specifically, those absolute universals which are true for interlanguages provide only trivial support for the above hypothesis. This is because any absolute universal will be true for every NL, making it possible for an IL to conform to the universal in question via transfer. On the other hand, if the absolute universal being tested is violated by the IL, then we have falsified our hypothesis, because there is at least one statement in $U_{pl}$ which is not true for at least one IL. We would then attempt to explain this violation in terms of the language-contact situation.

We have a different situation when we test our hypothesis with respect to typological universals. Consider, for example, the language-contact situation shown schematically in (6).

(6) a. In all languages, if X then Y

X = implicans
Y = implicatum

b. NL | TL X,Y

c. Resultant IL's

i. IL — IL contains neither

ii. IL Y — IL contains only implicatum

iii. IL X,Y — IL contains both

*iv. IL X — IL contains only implicans

We are attempting to test the typological statement in (6a), where X is the implicans and Y is the implicatum. Our hypothesis is supported if the resultant interlanguage in question contains (1) neither the implicans nor the implicatum; or (2) only the implicatum; or (3) both the implicans and the implicatum. The hypothesis is falsified if the IL has only the implicans.

To take a concrete example, consider the the typological statement in (7a).

(7) a. In all languages, if there are voiced, aspirated (i.e. murmured) stop phonemes, there are also voiced unaspirated stop phonemes.

b. NL Korean — TL Hindi

c. i. IL /ptk/

i. IL /ptk/ /bdg/

iii. IL /ptk/ /bdg/ /bʰdʰgʰ/

*iv. IL /ptk/ /bʰdʰgʰ/

The NL, Korean, has no voiced stop phonemes; the TL, Hindi, has both aspirated and unaspirated voiced stop phonemes. The IL's shown in (7c i-iii) which resulted from a Korean speaker learning Hindi would support the hypothesis in

(4) because none of the IL's in question violates (7a). The IL in (7c iv), however, violates (7a) and would therefore, falsify the hypothesis.

In general, we can obtain an interesting test of our hypothesis with respect to any given typological universal if we make two assumptions about the NL and TL. The first is that the NL must contain neither the implicans nor the implicatum, and the second is that the TL must contain both the implicans and the implicatum. The first assumption, that the NL contain neither, is necessary to prevent the universal from being satisfied by means of NL transfer. Consider, for example, a situation where the TL has both the implicans and the implicatum and the NL has neither. Our hypothesis is falsified if the interlanguage, at some stage, contains the implicans but not the implicatum. However, if we test the hypothesis in a situation where the NL has only the implicatum, we have not provided an unambiguous test of our hypothesis. This is because the IL may contain the implicatum not because of the presence of the implicans, but because of NL transfer.

The second assumption, that the TL contain both the implicans and the implicatum, is necessary to ensure a reasonable chance that both can occur in the IL. If the implicans is absent in the TL, it is unlikely that a learner will acquire it as part of the IL.

To recapitulate briefly, we have, up to this point, argued for the following (4) propositions: (a) that the hypothesis in (4) makes empirically testable claims about possible interlanguages by making predictions about what can and cannot be a viable IL; (b) that, in testing (4), IL structures should be considered in light of the structural properties of the respective NL and TL; (c) that only typological universals provide a reasonable confirmation of the hypothesis; and (d) that such tests should consider only certain NL-TL combinations where both the implicans and implicatum are part of the TL and neither is part of the NL.

Having made these proposals, let us now consider some typological universals and attempt to test our hypothesis against some interlanguage data.

## 3.0 The Test

### 3.1 Typologies

We shall test our hypothesis with respect to the four typologies shown

in (8).

(8) a. In all languages,
If there are voiced obstruents word-finally, there are voiceless obstruents word-finally;

If there are voiceless obstruents word-finally, there are sonorant consonants word-finally.

b. In all languages,
If there are word-initial or word-final consonant sequences of length n, there is also at least one continuous subsequences of length n-1 (where n>1) in that same position (Greenberg 1966).

c. In all languages,
If a language can relativize an NP out of a given position on the Accessibility Hierarchy (AH) (Keenan and Comrie, 1977), it can, using the same relative clause formation strategy, relativize an NP from all higher positions on the AH, but not necessarily all lower positions, where the AH is

Subject
|
Direct Object
|
Indirect Object
|
Oblique
|
Possessive
|
Object of a Comparative Particle

d. In all languages, inversions of statement order in questions so that the verb precedes the subject occurs only when the question word is normally sentence-initial.
If this inversion occurs in interrogative-word questions, it also occurs in yes-no questions (Greenberg 1978).

Given these universals, and given further our assumptions concerning the language-contact situation, it is possible to test the statements in (8) with speakers of the languages shown, respectively, in (9).

(9)

| | NL | TL |
|---|---|---|
| a. | Japanese, Mandarin | English |
| b. | Japanese, Korean, Spanish | English |
| c. | Arabic, Persian | English |
| d. | Japanese, Korean | English |

Thus, for example, Japanese and Mandarin speakers learning English provide an adequate test of (8a) because English has the implicans, voiced obstruents finally, and Japanese and Mandarin have neither the implicans nor the implicatum, because they have only sonorant consonants and vowels word-finally. Likewise, since Japanese, Korean and Spanish disallow initial obstruent clusters, speakers of these languages, learning English provide an interesting test of the hypothesis with respect to (8b). Arabic and Persian relative clauses provide an interesting test of (4) relative to (8c) because both require resumptive pronouns in certain positions in relative clauses where English does not. Since these positions can be implicationally arranged as in (8c), the relative clauses of the TL and NL differ in a number of respects which can be used to test (4). Finally, English has sentence-initial interrogative words and also requires subject-auxiliary inversion in both yes-no and interrogative-word questions, whereas Japanese and Korean do not have initial interrogative-words and do not require inversion in any questions.

3.2 Data

The IL data against which the typologies in (8) were tested were gathered from several sources and are shown in Tables 1-4.

((Insert Table 1 about here))

The data in Table 1 and 2 were gathered from students in the ESL Intensive Program at the University of Wisconsin-Milwaukee between 1978 and 1980. The methodology used to gather the data consisted of a set of elicitation techniques, as well as free conversations, which were used in several hour-long interviews. During the sessions, the subject's speech was recorded and then transcribed by the investigator and independently by an assistant for

reliability (See Eckman 1981 for details).

The data summarized in Table 3 were taken from Gass (1979) and Hyltenstam (1981). Gass' data were obtained by having the subjects perform two tasks: one required subjects to combine two sentences into one sentence containing a relative clause; and the other required subjects to make grammaticality judgements to determine the acceptability of a set of sentences containing relative clauses, where some sentences in the set were well-formed and others were ill-formed. The data from Hyltenstam were obtained through an elicitation exercise whereby the subjects were shown a set of pictures about which they were asked questions. In answering the questions, the subjects were to produce relative clauses.

Table 4 shows data which were elicited from a Japanese student, during the fall of 1981. This subject is a twenty-nine-year-old female who had studied English in Japan for four years before coming to the U.S. to study English in January of 1981. The data were gathered using pictures about which the subject was directed to ask questions. The subject's speech was recorded and then transcribed using standard orthography.

3.3 Results

The data in Table 1 were taken from native speakers of Japanese, Mandarin, Spanish and Farsi. Whereas Farsi does exhibit a voice contrast in word-final position, none of the other three languages does. Japanese and Mandarin allow no obstruents word-finally; Spanish does allow word-final [ð] and [s], but does not exhibit a voice contrast.

When we consider the data in Table 1, we see that they are in conformity with the typological statement in (8a). Specifically, the data in A and B taken from, respectively, native speakers of Japanese and Mandarin, exhibit voiced and voiceless obstruents, sonorant consonants and vowels word-finally. The data in C and D, on the other hand, exhibit only voiceless obstruents, sonorants and vowels word-finally. The fact that these data conform to the statement in (8a) is particularly interesting since there is no obvious way to account for these data by means of language transfer. As pointed out above, Japanese and Mandarin allow no final obstruents. Consequently the presence of these obstruents in the IL's in A and B of Table 1 cannot be explained by transfer. Neither can we appeal to the NL, Spanish, to explain

the final voiceless obstruents shown in C of Table 1. And finally, whereas the NL, Farsi, does have a final voice contrast, the IL in question lacks such contrast. Thus, there appears to be no way of accounting for the data in Table 1 on the basis of NL transfer alone.

((Insert Table 2 about here))

The situation is similar when we consider the data in Table 2 with respect to the typological statement in (8b). The IL's of the Japanese and Spanish subjects manifest either tri-literal and bi-literal consonant clusters, or they exhibit just bi-literal clusters. Thus, if a subject can produce a tri-literal cluster he/she can also produce the bi-literal subsequences of such a cluster. For example, subject CA produced str in street and also st in stay. On the other hand, the Japanese subject produced only bi-literal obstruents clusters like sp, st and sk, without producing any tri-literal clusters. The fact that these data support the typology in (8b) confirms the hypothesis in (4). Again, what is interesting, is that the forms in Table 2 cannot be accounted for by transfer since Japanese and Spanish do not allow any word-initial obstruent sequences.

((Insert Table 3 about here))

When we consider the data in Table 3, we see that the AH in (8c) is, in general, borne out. The data from Gass (1979) show that the percentage of correct sentences across the various grammatical functions corresponds to the AH, with the exception of the genitive. Gass offers two possible explanations for why her subjects performed better on the GEN position than the DO and IO-OPREP positions: (1) the genitive position is uniquely coded in that it has only a single relative marker, whose, as opposed to that/which and is therefore more salient; or (2) the subjects may have treated the whose + NP as a unit, which was then used as one of the grammatical functions such as subject, direct object etc. Since all of Gass' sentences with respect to the genitive position involved a combination of whose + a subject NP or whose + an object NP, this may account for the relative degree of success which her subjects found in relativizing this position. Whatever explanation turns out to be defensible, it seems clear that the typology in (8c) is, in

general, supported by Gass' data.

The data from Hyltenstam (1981) are also, in general, supportive of the AH. As can be seen from Table 3, the pronoun retention pattern exhibited by learners from various NL's acquiring Swedish parallels the AH with high scalability.

Thus, while the data relevant to (8c) are not in perfect agreement with the AH, they do generally support the typological statement in question. To the extent that the data are supportive, the hypothesis in (4) receives confirmation.

((Insert Tabel 4 about here))

Finally, the data in Table 4 support the typological statement in (8d) with respect to the hypothesis in (4). Specifically, the subject is a native speaker of the NL, Japanese, which does not have sentence-initial interrogative words, nor does it have inversion in either yes-no or interrogative-word question. The data show that, although the subject does produce some interrogative-word questions which are deviant (3,5,10,12,15, &21) all such questions have initial interrogative-words and have appropriate subject-auxiliary inversion where possible. Likewise with the yes-no questions: although some are structurally deviant, all have subject-auxiliary inversion. Thus, the data given in Table 4 support our hypothesis with respect to the generalization in (8d). This is significant, since this cannot be accounted for in terms of the NL.

To recapitulate briefly, the IL data given or summarized in Tables 1-4 support, in general, the statements in (8), with (8c) being the only typological generalization where the data do not match perfectly. This being the case we will now consider the question of whether any aspects of the IL rules which produced these data are in violation of any statements in $U_{pl}$. That is, we shall consider the IL systems represented by the data in Tables 1-4 in terms of the structural properties of the respective NL's and TL.

## 4.0 Discussion

In our interpretation of the data in Tables 1-4, we saw that, in general, the typological statements in (8) were supported. This means that in

terms of the interlanguage forms themselves, we found no significant violations of the statements in (8). Thus we see that our investigation of IL data to this point supports our hypothesis. The question that we now wish to raise is whether the grammars of IL's obey the same constraints as the grammars of PL's.

In raising this issue we are considering the set $U_{pl}$ to consist of two kinds of universal statements: (1) those pertaining to the forms or utterances of languages; and (2) those relating to the grammars of such languages. In considering the typologies in (8), we have been dealing with IL forms. We will now turn our attention to the grammars of the IL's in question.

Along this line, we need to consider two additional statements which are, presumably, included in $U_{pl}$:

(10) a. If a language has a voice contrast word-finally, it will necessarily have such a contrast word-medially and word-initially, but not vice versa (Dinnsen and Eckman 1978)

b. No language will have a grammar which contains a rule of final-vowel-insertion (paragoge). (Sanders 1979)

The generalization in (10a) concerns the type of voice contrast that a language will exhibit, making a final voice contrast more marked than a medial or initial voice contrast. The constraint in (10b) was proposed within Sanders' (1972) framework of Equational Grammar, where rules which are inverses of each other must be metatheoretically excluded. Since rules which delete vowels word-finally can be motivated for at least some languages, rules which insert vowels in final position are, in principle, excluded. The fact that there are no attested cases where such rules are motivated supports Sanders' theory.

Now, given the universal statements in (10), let us reconsider the data in Tables 1-4. We have already argued that the typologies in (8) are obeyed. What we wish to determine now is (a) whether the statements in (10) are obeyed or violated; and (b) whether we can explain any of the IL's in question either adhering to or violating the generalizations in (8) and (10). That is, we want to know which of the types of interlanguages shown in (5) are

realized in the data in Tables 1-4.

Within this context, we can argue that the data in C of Table 1 represent a Type A interlanguage. More specifically, the IL forms in question exhibit a voice contrast word-initially and medially, but not word-finally. In word-final position, only voiceless obstruents occur. As a consequence, these data are in conformity with the statement in (10a). The reason for this conformity seems clear: the NL, Spanish, does not have a final voice contrast; as pointed out above, /ð/ and /s/ are the only word-final obstruents that Spanish allows. The TL, English, on the other hand, has a final voice contrast. Given that a final voice contrast will be relatively difficult to acquire for a speaker whose native language does not have such a contrast (Eckman 1977), we can explain the learner's failure to maintain such a contrast in the IL in terms of the structures of the NL and TL.

An example of an IL like type B is represented by the data in A and B of Table 1, which contains forms exhibiting an alternation between a word-final /ə/ and null. In Eckman (1981), it was argued that such forms motivate an IL rule of Schwa Paragoge, formulated as in (11).

(11) Schwa Paragoge (SP)

$$\emptyset \xrightarrow{(opt)} \text{ə} \; / \; \begin{bmatrix} -\text{son} \\ +\text{voice} \end{bmatrix} ____ \; \#$$

(Optionally insert a /ə/ after a word-final voiced obstruent)

Since a rule like SP is in violation of the universal constraint in (10b), it seems that we have an instance where an IL grammar violates a constraint on primary-language grammars. What remains to be demonstrated is whether this violation can be explained in terms of the NL-TL contact.

The argument that the above can be so explained is essentially that put forth in Eckman (1981). Specifically, the NL's, Japanese and Mandarin, evidence only vowels and sonorants word-finally, whereas the TL has word-final voiced and voiceless obstruents, in addition to sonorants and vowels. The learner, finding final voice obstruents to be an area of difficulty (Eckman 1977), sometimes adds a word-final schwa to the underlying forms in (12a) to produce phonetic forms like those in (12b).

(12) a. /tæg/ "tag" /ʸab/ "job" /rɛd/ "red"

b. [tægə] [ʸabə] [rɛdə]

The rationale for such a rule, as discussed in Eckman (1981), is that the addition of a final schwa accomplishes two things. First, it places the problematic final consonant in a less marked position relative to a voice contrast, namely, medial position. Second, such a rule maintains the canonical form of the underlying representation, which, according to the analysis, the IL speaker has correctly learned. That is, if the learner dealt with the problematic final voiced obstruent by, say, deleting it, then the learner would be destroying some of what he/she has already learned: that "tag" has a word-final [g]. On the other hand, adding a final vowel brings the TL word into conformity with the phonological constraints of the NL, places the voiced obstruent in an easier position and preserves the integrity of the underlying form. The SP rule can be explained, then in terms of the discrepancy between the underlying forms in (12a), which contain final voiced obstruents, on the one hand, and the NL surface constraint which does not allow any obstruents finally, on the other hand.

Rules of paragoge do not exist in primary-language grammars because such languages do not have (and presumably, could not have) underlying forms with final voiced obstruents and also a surface constraint against forms with final obstruents. If the language contained such a surface constraint, underlying representations like (12a) could not be defended. Interlanguages, on the other hand, appear special in this sense, because they always involve language contact, and therefore, the possibility exists that there will be underlying forms like those in (12a) along with a constraint against final obstruents as part of the same IL system. Thus, we consider the IL in Table 1B to be an example of a type B IL.

An example of an IL of type C is represented by the data in Table 1D. Although the phonetic forms in Table 1D conform to the typology in (8a), there is no accounting for this fact in terms of the language contact. Both the NL, Farsi, and the TL, English, exhibit a superficial voice contrast in word-final position. Consequently, the IL forms conform to the relevant statements of $U_{pl}$, but are not directly explainable on the basis of NL-TL contact.

One possible explanation which is independent of the NL-TL situation is that learners tend to acquire simplified versions of the system that they are learning (Corder 1978). If we assume that phonologies with only voiceless word-final obstruents are simpler than those with a voice contrast finally, then the data in Table 1D can be explained, not in terms of the language contact, but by the hypothesis that learners produce simplified forms of the systems they are acquiring.

Finally, an interlanguage of type D is one which would be troublesome for the general framework which we are presenting. This type of IL would violate at least one statement in $U_{pl}$ in a manner which could not be explained in terms of the structure of the NL and/or TL. Presumably, IL's of type D do not exist, since no data have ever been presented in support of such an IL. However, it would be worthwhile to examine the type of data which would constitute such an interlanguage, if it in fact did exist.

To take an example first from phonology, let us consider the rule of Schwa Paragoge (SP). We have argued that, whereas such a rule is in violation of a statement in $U_{pl}$, that violation is explainable in terms of the phonological structure of the NL and TL involved. A type D IL, then, would be an interlanguage which had a rule like SP, but where the NL and TL involved did not make it possible to explain the rule. That is, where the NL and TL were not Mandarin and English, or Japanese and English, respectively. Thus, an IL which contained a rule like SP, where both the NL and TL exhibited a word-final voice contrast would be a type D IL. Therefore, we would never expect speakers of Arabic or Persian, both of which have a final voice contrast, to produce forms like (13) when learning English.

| (13) | IL form | Gloss |
|---|---|---|
| | tæɡə | tag |
| | rɛdə | red |

Likewise, we would not expect Japanese and Mandarin learners of German, which has only voiceless obstruents in final position, to develop a rule like SP. Rather, such a rule should arise, according to our assumptions only when the discrepancy between the TL and NL is great enough that the TL <u>has</u> final voiced

obstruents and the NL has a constraint <u>against</u> <u>all</u> final obstruents, that is, the NL allows only sonorants and vowels word-finally.[5] Thus, Japanese and Mandarin learners of German should never say forms like those in (14).

| (14) | IL form | TL form | Gloss |
|---|---|---|---|
| | takə | tak | day |
| | dɛkə | dɛk | deck |

If such a rule did develop in this learning context, then that would characterize a type D IL.

Turning to syntax, an example of a type D IL would be a Japanese speaker learning English, where the resultant IL was typefied by forms like those in (15).

(15) a. You are going where?
b. Are you going where?
c. He is going home?

(15a) represents a question where the interrogative word is not preposed; (15b and c) show that the inversion of the verb and subject occurs in the interrogative-word question and not in the yes-no question. Consequently, questions like those in (15) would violate (8d). Moreover, such violations would not be explainable in terms of the NL-TL contact, because Japanese has no inversion whatever in questions. Therefore, if questions like those in (15) characterized an IL, then that IL would be a type D interlanguage.

The above hypothetical examples of type D IL's are summarized in (16)

| (16) | | | | |
|---|---|---|---|---|
| | a. | NL = Arabic, which has final voice contrast | TL = English, which has final voice contrast | IL gives evidence of paragoge. |
| | b. | NL = Japanese, which has no final obstruents | TL = German, which has no final voiced obstruents | IL gives evidence of paragoge. |

| | | | |
|---|---|---|---|
| c. | NL = Japanese, which has no obligatory inversion of subject-verb in questions, and no initial interrogative | TL = English, which has subject-verb inversion in questions and initial interrogative words. | IL has questions where interrogative is not initial but subject-verb inversion occurs. |

5.0 Conclusion

The central question to which this paper has addressed itself is this: what do we conclude when we find that an interlanguage violates a universal statement which was formulated on the basis of data from primary languages? One possible conclusion we could draw would be that the universal is false and must be discarded; another would be that the domain of the universal must be restricted to apply only to PL's, thereby insulating statements in $U_{pl}$ from falsification on the basis of IL data. The position that we have taken in this paper is essentially a modified version of the second alternative.

The first alternative of discarding the universal is undesirable for several reasons, not the least of which is the fact that universals are highly valued and are not easily discarded. In addition, there is a natural domain over which the universal statement does hold, namely, all primary languages. Since we know that IL's and PL's differ in certain respects, then it would not be implausible for these language types to differ structurally also. Consequently, instead of discarding the universal, we would simply designate it as pertaining only to PL's and develop a classification of universals in terms of the domain over which they hold: all language types, primary languages or interlanguages.

This is essentially the second alternative. However, restricting universal statements to certain domains can be very unenlightening if we merely classify these statements into arbitrarily-determined sets. On the other hand, such a classification can be very enlightening if we attempt to correlate the different structural aspects of PL's and IL's with other differences between these language types. This is the position that we have taken in this paper. We have focused on one salient difference between interlanguages and primary languages, namely, that language contact is always involved in the development of the former but not necessarily the latter; and

we have attempted to correlate this difference with at least one structural difference between IL's and PL's. The fact that the grammar of at least two IL's contains a rule of paragoge, whereas this rule type is not contained in the grammar of any PL is due, we have argued, to the language-contact situation.

At the same time, we have attempted to maintain the empirical nature of our inquiry by allowing our general framework to be falsified if it can be shown that structural differences between IL's and PL's cannot be explained on the basis of the language contact. We recognize that it is entirely possible, in fact, very plausible, that differences in structure between IL's and PL's can be correlated with other differences between these language types. However, since this remains to be shown, this question must, for now, be left open.

FOOTNOTES

* Some of the ideas for this paper were developed through frequent and extended conversations with Edith Moravcsik and Jessica Wirth. The author wishes to thank Dan Dinnsen, Carol Lord, Edith Moravcsik, Gerald Sanders and Jessica Wirth for their comments and suggestions on some of the ideas in this paper. None of the above-mentioned necessarily agrees with the content of this paper, and should not be held responsible for any errors or inconsistencies.

1. Absolute and typological universals in this paper correspond respectively to Comrie's (1981) terms non-implicational and implicational universals.

2. The content and discussion of (3) are due to Edith Moravcsik.

3. There may be other grounds on which the violations of/adherence to the statements in $U_{pl}$ could be explained, such as psychological or social grounds. However, any such explanation of specific structural properties of IL's on grounds other than structural would have to be argued.

4. Resumptive pronouns are pronouns which occur in the position in the underlying representation from which an NP was relativized. For example, in the sentence

I saw the boy whom the dog bit <u>him</u>.

the underlined word is a resumptive pronoun.

5. The point being made here is that the set of rules which is possible for IL grammars may be larger than that possible for grammars of PL's. We have attributed this to the fact that the differences between underlying and surface representation in IL's may be "greater" than one finds in PL's. However, exactly how great this differences must be to warrant our conclusion is an issue which is beyond the scope of the present paper and one for which we have no proposals at present.

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TABLE 1

| | IL Form | Gloss | | IL Form | Gloss |
|---|---|---|---|---|---|
| A. | | | B. | | |
| Japanese | lʌv~lʌvə | love | Mandarin | tæ gə~tæ g | tag |
| Subj N.M. | dʌn | done | | rab | rob |
| | bev~bevə | bathe | | bigɔr | bigger |
| | tʊk | took | | ɔθər | author |
| | bæ d~bæ də | bad | | sIt | sit |
| | lɛt | let | | zon | zone |
| | pIg~pIgə | pig | | sop | soap |
| | tun | tune | | ɔf | off |
| | tus | tooth | | si | see |
| | rud~rudə | rude | | fayf | five |
| | tæ v~tæ və | tab | | bæ d | bad |
| | lidə | leader | | tel | tail |
| | kul | cool | | lɛt | let |
| | | | | gʌn | gun |
| | | | | pig | pig |
| | | | | ǰabə~ǰab | job |
| | | | | rɛdə~rɛd | red |
| C. | | | D. | | |
| Spanish | tæk | tag | Farsi | bIk | big |
| Subj P.C. | bIk | big | Subj A.B. | bIgəst | biggest |
| | bigər | bigger | | bap | Bob |
| | rap | rob | | babi | Bobby |
| | rabər | robber | | bet | bathe |
| | ɔtər | author | | beðI | bathing |
| | sIt | sit | | sæt | sad |
| | pæ kIŋ | packing | | sædər | sadder |
| | son | zone | | pik | pig |
| | sop | soap | | piki | piggy |
| | tæ pIŋ | tapping | | nit | need |
| | pæs | pass | | nidIŋ | needing |
| | dek | deck | | pIkIŋ | picking |
| | lesi | lazy | | næ pIŋ | napping |
| | fayf | five | | | |
| | bot | vote | | | |
| | dʌn | done | | | |
| | ovər | over | | | |
| | kil | kill | | | |
| | gʌn | gun | | | |
| | isi | easy | | | |

TABLE 2 IL data pertaining to typology (7b).

| | IL Form | Gloss |
|---|---|---|
| Japanese | | |
| Subj Y.Y. | stəɹit | street |
| | skul | school |
| | skəɹim | scream |
| | skəɹæp | scrap |
| | tray | try |
| | kray | cry |
| | spil | spill |
| | spəlɛd | spread |
| | spəlin | spleen |
| | spɛl | spell |
| | spəray | spry |
| | spay | spy |
| | pray | pry |
| | ple | play |
| | klos | close |
| | kəlæs | class |
| | təřet | treat |
| Spanish | | |
| Subj A.M. | ɛsplæš | splash |
| | ste | stay |
| | slip | sleep |
| | ɛstartəd | started |
| | ɛstim | steam |
| | stim | steam |
| | ɛstrit | street |
| | ples | place |
| | spIl | spill |
| | tray | try |
| Spanish | | |
| Subj C.A. | ɛstrɔŋ | strong |
| | strŋ gəst | strongest |
| | stɔp | stop |
| | spɛl | spell |
| | skul | school |
| | spɛs | space |
| | sket | skate |
| | striŋgi | stringy |
| | skrim | scream |
| | splæš | splash |

Table 3

Data from Gass (1979)

Percentage of sentences correct by language groups

| S | DO | IO OPREP | GEN | OCOMP | |
|---|---|---|---|---|---|
| 48 | 28 | 27 | 47 | 10 | (Arabic) |
| 90 | 30 | 25 | 30 | 13 | (Thai) |
| 68 | 28 | 17 | 33 | 0 | (Romance) |
| 70 | 20 | 18 | 38 | 4 | (Persian) |
| 78 | 60 | 28 | 88 | 0 | (Chinese, Japanese, Korean) |

Data from Hyltenstam (1981)

Implicational scales showing pronominal retention for learners of Swedish with different NL's.

( + = retention of pronoun; - = non-retention of pronoun; 0 = retention of nominal)

| Subj nr | SU | DO | IO | OBL | GEN | OCOMP |
|---|---|---|---|---|---|---|
| 21 | - | - | - | - | - | - |
| 32 | - | - | - | - | + | + |
| 17 | - | ⊕ | ⊕ | - | + | ⊖ |
| 18 | - | ⊕ | ⊕ | - | + | + |
| 7 | - | - | + | + | + | + |
| 16 | - | - | + | + | + | + |
| 6 | - | - | + | + | + | + |
| 34 | - | + | + | + | + | + |
| 30 | - | + | + | + | + | + |
| 28 | - | + | + | + | + | + |
| 29 | - | + | + | + | + | + |
| 15 | - | + | + | + | + | + |

NL = Persian; Scalability = 93.1

Table 3 (continued)

| Subj nr | SU | DO | IO | OBL | GEN | OCOMP |
|---|---|---|---|---|---|---|
| 48 | - | - | - | - | 0 | - |
| 52 | - | - | - | - | 0 | - |
| 44 | - | - | - | - | (+) | - |
| 47 | - | - | - | - | (+) | - |
| 51 | - | - | - | - | (+) | - |
| 45 | - | - | - | 0 | (+) | - |
| 50 | - | - | - | - | 0 | + |
| 46 | - | - | - | - | + | + |
| 49 | - | - | - | - | + | + |

NL = Finnish; Scalability = 85.2 (if 0 = +)
or 92.6 (if 0 = -)

Table 3 (continued)

| Subj nr | SU | DO | IO | OBL | GEN | OCOMP |
|---|---|---|---|---|---|---|
| 20 | - | - | - | - | - | - |
| 41 | - | - | - | - | + | (-) |
| 14 | - | - | - | - | + | 0 |
| 43 | - | - | - | - | + | + |
| 12 | - | - | - | - | + | + |
| 13 | - | - | + | + | + | + |
| 40 | - | - | + | + | + | + |
| 27 | - | + | + | + | + | + |
| 42 | - | + | + | + | + | + |
| 22 | - | + | + | + | + | + |
| 11 | - | + | + | + | + | + |
| 10 | - | + | + | + | + | + |

NL = Greek; Scalability = 97.1 (if 0 = -)
or 98.7 (if 0 = +)

| Subj nr | SU | DO | IO | OBL | GEN | OCOMP |
|---|---|---|---|---|---|---|
| 2 | - | - | - | - | - | - |
| 31 | - | - | - | - | (+) | - |
| 37 | - | - | - | - | (+) | - |
| 33 | - | - | - | - | (+) | - |
| 3 | - | - | - | - | - | + |
| 8 | - | - | - | - | + | + |
| 5 | - | - | (+) | - | + | (-) |
| 4 | - | - | (+) | - | + | + |
| 9 | - | - | (+) | - | + | + |
| 19 | - | - | + | + | + | + |
| 24 | - | + | + | + | + | + |
| 35 | - | + | + | + | + | + |

NL = Spanish; Scalability = 90.3

TABLE 4

Japanese
Subj Y.Y.

| Yes-No Questions | Interrogative-word Questions |
|---|---|
| 1. Do you like chocolate apple? | 1. What kind do you like? |
| 2. Do you like money? | 2. How many money? |
| 3. Is this much money? | 3. Who does it have? (Who has it?) |
| 4. Are they family? | 4. Where are they? |
| 5. Is it basket? | 5. What kind basket? (What kind of basket is it?) |
| 6. Are they party? | 6. How many child are they? |
| 7. Is she smiling? | 7. Why is he smiling? |
| 8. Do you have apple? | 8. What is picture do? |
| 9. Does he have many present? | 9. What kind do you like? |
| 10. Do you like soccer. | 10. What kind of sport? (What kind of sport is it?) |
| 11. Do you like sports? | 11. What does he have? |
| 12. Is he happy? | 12. What does it need a dumbbell? (Why does he need a dumbbell?) |
| 13. Do you like circus? | 13. What do you like play? |
| 14. Do you like this picture? | 14. What does he do? |
| 15. Do you like flower? | 15. What kind of this picture? (What kind of picture is this?) |
| 16. Is there America? | 16. Who does eat chocolate pudding? |
| 17. Do you like family? | 17. Who is taller? |
| | 18. What are they doing? |
| | 19. Where are they? |
| | 20. What do you think? |
| | 21. How many people do they? (How many people are there?) |
| | 22. What is he doing? |
| | 23. What is the reason? |